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REFLEXIONS

K. Bentham

UPON

LOGICK.

Sic enim, inquam, Brute, existimo, juris civilis magnum usum & apud Scævolam, & apud multos fuisse, artem in hoc uno: (sc. Servio Sulpicio) *quod nunquam effecisset ipsius juris scientia, nisi eam præterea didicisset artem, quæ doceret rem universam tribuere in partes, latentem explicare definiendo, obscuram explanare interpretando, ambiguam primum videre, deinde distinguere, postremo habere regulam, qua vera & falsa judicarentur, & quæ quibus propositis essent, quæque non essent consequentia. Hic enim attulit hanc artem, omnium maximam, quasi lucem ad ea, quæ confuse ab aliis aut respondebantur, aut agebantur.* Dialecticam *mihi videris dicere, inquit. Recte, inquam, intelligis.* Cic. Brut.

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REFLEXIONS

UPON

LOGICK.

TO THE YOUTH

OF *ORIEL COLLEGE*

AND

CHRIST CHURCH

THESE REFLEXIONS

UPON LOGICK

ARE INSCRIBED

THEIR AFFECTIONATE

HUMBLE SERVANT

EDWARD BENTHAM.

CONTENTS.

ARtificial Logick *what p.* 1. *Why neceſſary and upon what occaſions,* 2, 3. *Treatiſes of Logick various,* 4, 5, *Scholaſtick and Modern; the latter moſt entertaining; but not the propereſt for beginners,* 6, 7. *Scholaſtick Logick why it ſeems dry and uſeleſs* 8, 9, *this no ſufficient objection,* 10. *How far a Gentleman ſhould engage in the ſtudy of it,* 11. *Analogy between Logick and Grammar,* 12. *What is to be expected from a treatiſe of Logick,* 13. *General diviſion of Scholaſtick Logick,* 15. *Intent of the* firſt *part; and expediency of the aſſiſtance which it affords,* 16, 17, 18. *Doctrine of* Univerſals *its uſe,* 18, 19, 20, 21, 22. Ariſtotle's *Logical obſervations, why not all of them equally uſeful to us,* 23, 24. *The* Predicaments *not very important;* 25 *nor yet ſo ridiculous and uſeleſs, as ſometimes repreſented,* 26, 27. *The* ſecond *part, its deſign and uſefulneſs,* 28. *The deſign of the* third *part: the* three *parts of Logick how ſubſervient to each other,* 29, 30. *Syllogiſtick form whether always to be obſerved: its uſefulneſs,* 31, *how great and extenſive,* 32, 33, *Wrong to place Mathematicks and Logick in oppoſition to each other,* 33, 34. *Whether Logick aſſiſts us as to the* matter *of Reaſoning,* 35, *Scholaſtick* maxims *whether uſeful and how far,* 35, 36. *Whether the art of* Method *falls under Logick and how far,* 37, 38, 39. *Uſe of* Diſputation *in general, and Logical in particular,* 40, 41, 42, 43. *Scholaſtick* terms of Art *how they came to be ſo numerous,* 43, 44. *Scholaſtick* Diſtinctions *their uſe,* 45. *Cenſure of Scholaſtick diſputations and diſtinctions often ill founded,* 46, 47. *Pedantry not peculiar to the Scholaſtick ages,* 47, 48. *Schoolmen not ſo very contemptible as they are ſometimes repreſented,* 49. *The Logick of* Cicero *and* Quinctilian *much the ſame with that of the Schools,* 49, 50. Cicero's *example favours this ſtudy,* 51. *Summary of what is recommended in the foregoing Reflexions,* 52. *Study of Logick not inconſiſtent with the attainments of polite Learning, or uſeful accompliſhments,* 10, 11, 12, 13, 14, 22, 38, 39, 53. *Hiſtorical Catalogue of writers in Logick,* 54, 55, 56.

REFLEXIONS UPON LOGICK.

ARTIFICIAL Logick [1] is a collection of ſuch rules and obſervations, as may enable us to make the beſt uſe of our intellectual faculties, both in our own enquiries after truth, and in the communication of it to others. It differs no otherwiſe from Common-ſenſe, than as it brings into view ſome of its more uſeful maxims digeſted into method, and expreſſed in Terms of Art.

It muſt be confeſſed that the ſhare of [2] common apprehenſion, which men enjoy as reaſon-

1 *Dialectica ſeu*, diſſerendi ratio & ſcientia — per omnes partes ſapientiæ manat & funditur, — rem definit, genera diſpertit, ſequentia adjungit, perfecta concludit, vera & falſa dijudicat. *Cic. Tuſc.* Lib. 5.

2 Hujus generis demonſtratio eſt & doctrina ipſa vulgaris, uſus autem graviſſimus. *Cic. de Orat.* L. 3. p. 309. — Quia vis magna eſt in hominum ingeniis, eo multi ſine doctrinâ aliquid omnium generum atque artium conſequuntur. *id.* L. 2. p. 108.

able Beings, generally proves ſufficient to conduct them in the ordinary affairs of life: But at the ſame time it is found to require ſome ſkill [1] ariſing from art and experience, as well as a natural ſtrength of underſtanding, to carry on our enquiries ſucceſsfully beyond the more obvious appearances of any ſubject, to follow it through all the intricacies and objections which may ariſe, and to clear the conſiſtency of it in all its parts: [2] And whoever refuſes to make uſe of that aſſiſtance, which is offered him in the ways of cloſe and abſtruſe reaſoning, will frequently find himſelf [3] totally loſt or much bewildered.

By natural ſagacity a man often perceives that there is ſomething faulty in another's reaſoning, but at the ſame time is uncapable [4] of diſcover-

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1 Nec vero ſine Philoſophorum diſcīplina genus & ſpeciem cujuſque rei cernere, neque eam definiendo explicare, nec tribuere in partes poſſumus: nec judicare quæ vera quæ falſa ſint; neque cernere conſequentia, repugnantia videre, ambigua diſtinguere. *Cic. Orat.* p. 302.

2 Perſpicuitas — ſatis magnam habet vim, ut ipſa per ſeſe ea, quæ ſint, nobis, ita ut ſint, indicet: ſed tamen ut maneamus in perſpicuis firmius & conſtantius, majore quadam opus eſt vel arte vel diligentia, ne ab iis, quæ clara ſint ipſa per ſeſe, quaſi præſtigiis quibuſdam & captionibus depellamur. *Cic. Acad. Quæſt.* L. 4.

3 Hic ſi definire vel dividere didiciſſet, ſi loquendi vim, ſi denique conſuetudinem verborum teneret, nunquam in tantas ſalebras incidiſſet. *Cic. de Fin.* L. 2. p. 56.

4 Cum plerique temere ac nulla ratione cauſſas in foro dicant; nonnulli autem propter exercitationem, aut conſuetudinem aliquam callidius id faciant: non eſt dubium, quin ſi quis animadverterit

ing where the fault lies. How desirable must it be, in such circumstances, to have the mark pointed out precisely, to which the force of his attention should be levelled, to have his thoughts put into such a [1] regular train as may enable him to unravel the difficulty, to apprehend the true state of the question, and weigh well the consequences arising from it? No thoughtful man, I believe, can help endeavouring to form to himself something of an art or method how to think and argue, or ever [2] repented of giving himself some trouble for that purpose.

The use of Logick is universal, and may be maintained upon this principle, that there is a general analogy [3] in reasoning upon all subjects:

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verterit quid sit quare alii melius quam alii dicant, id possit notare. Ergo id qui toto in genere fecerit, is si non plane artem at quasi artem quandam invenerit. *Cic. de Orat.* L. 2. p. 106.

1 Studia nihil prosunt perveniendi aliquo, nisi illud, quod eo quo intendas ferat deducatque, cognôris. *id.* L. 1. p. 44.

2 Semper ego [*Antonius*] existimavi jucundiorem & probabiliorem huic populo oratorem fore, qui primum quàm minimam artificii alicujus deinde nullam Græcarum rerum significationem daret. Atque ego idem existimavi pecudis esse, non hominis, cum tantas res Græci susciperent, profiterentur, agerent, seseque & videndi res obscurissimas, & bene vivendi & copiosè dicendi rationem hominibus daturos pollicerentur, non admovere aurem; & si palàm audire eos non auderes, ne minueres apud tuos cives auctoritatem tuam, subauscultando tamen excipere voces eorum, & procul, siquid narrarent, attendere. Itaque feci, Catule, & istorum omnium summatim causas, & genera ipsa gustavi. *Cic. de Orat.* L. 2. p. 146.

3 Omnis res eandem habet naturam ambigendi de quâ quæri & disceptari potest. *id.* L. 3. p. 267. Una est — eloquentia quas-

ſo that by learning how to apply its rules to familiar caſes, we become enabled to adapt them to any obſervations, which we ſhall chance to make afterwards. By this means we ſhall diſcern, whether we have got a view of any ſubject in all its branches, and more ſucceſsfully uſe our diſcretion in judging, what parts of it deſerve to be conſidered minutely; in what method, and how far, they may be uſed, either as to the purpoſes of Civil Prudence or of other uſeful Science.

Improvement in knowledge having been ever eſteemed à matter of great importance, [1] 'twas natural for men of leiſure and experience to buſy themſelves in pointing out the means conducive

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cunque in oras diſputationis regioneſve delata eſt. *id.* L. 3. p. 236. Dialecticorum & Oratorum utramque vim unam eſſe noſtri putant. *Cic. Acad.* L. 1.

1 Homines ſicut in Medicina, cum viderent alia ſalubria, alia inſalubria, ex obſervatione eorum effecerunt artem; ita cum in dicendo alia utilia, alia inutilia deprehenderent, notarunt ea ad imitandum vitandumque; & quædam ſecundum rationem eorum adjecerunt ipſi quoque; Hæc confirmata ſunt uſu; tum quæ ſciebat quiſque docebat. *Quinct.* L. 3. c. 2.

Ut homines labore aſſiduo & quotidiano aſſueti, cum tempeſtatis causâ opere prohibentur, ad pilam ſe, aut ad talos, aut ad teſſeras conferunt, aut etiam novum ſibi ipſi aliquem excogitant in otio ludum: ſic illi à negotiis publicis, tanquam ab opere aut temporibus excluſi, aut voluntate ſuâ feriati, totos ſe alii ad poetas, alii ad geometras contulerunt; alii etiam (ut dialectici) novum ſibi ipſi ſtudium ludumque pepererunt, atque in iis artibus, quæ repertæ ſunt, ut puerorum mentes ad humanitatem fingerentur atque virtutem, omne tempus atque ætates ſuas conſumſerunt. *Cic. de Orat.* L. 3.

to

to this end. Accordingly, from the flouriſhing ages of *Greece* downwards, many have collected and methodized the obſervations which they formed on the working of their own Minds, or, in other words, wrote their ſeveral ſyſtems of Logick [1]. Theſe were generally ſuited to the taſte of the times, and appeared in faſhionable dreſs. And therefore when Scholaſtick Learning was moſt in vogue, all the treatiſes on this ſubject borrowed from thence a very diſagreeable caſt: And though the method of writing was ſtrict and cloſe, yet the matter of the obſervations was generally jejune and inſipid; the language was harſh and overcharged with abſtruſe ſubtleties, many of them uſeleſs as well as unpleaſing. The taſte of later ages, and particularly the preſent, being very different, our moſt celebrated Logical performances are of a quite different kind: and the ridicule, which has been very liberally beſtowed upon the pedantry of the Schools, hath led men into the contrary extreme of affecting to philoſophize in a leſs reſtrained method, and in a language more copious, polite and elegant. But as ſome of Scholaſtick Logicians endeavoured to make their Lo-

1 See the Catalogue of Logicians ſubjoined to theſe *Reflexions*.

gical

gical Syſtems the whole magazine of Science, and thus diſparaged the real uſefulneſs of this art by raiſing an [1] expectation which they could never anſwer, ſo many of the Moderns, more intent upon giving ſpecimens of their own improvement in knowledge, and ſtriking out of the road of common place, have failed of giving proper aſſiſtance to young Learners. They launch out into various diſquiſitions upon abſtruſe ſubjects; and often draw the illuſtration of their rules from the depth of other ſciences. By this means, while they ſeem to enrich the mind with new diſcoveries, and therefore entertain the Fancy, they perplex the Judgment; while they promiſe to give the underſtanding more activity and freedom, they really rob it of that balaſt, which is requiſite to keep it ſteady, and prevent it from being haſty and precipitant in its determinations. Thus, enquiries into the nature of our Souls, our Senſations, our Paſſions and Prejudices, with other ſprings of wrong judgment, make a part of the natural Hiſtory of Man, ra-

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1 *Accordingly the art itſelf is thus rallied,*

Dialecticam inventam eſſe dicitis, veri & falſi quaſi diſceptatricem & judicem. Cujus veri & falſi? & in quâ re? In Geometriâne quid ſit verum & falſum Dialecticus judicabit, an in Literis, an in Muſicis? At ea non novit. In Philoſophiâ igitur? Sol quantus ſit, quid ad illum? quod ſit ſummum bonum, quid habet ut queat judicare? &c. *Cic. Academ.* L. 2. §. 28.

ther

ther than a part of Logick, and are of too mixed a nature to fall under general rules. The Logical Theory contained in *Mr. Locke's Eſſay*, ſo far as it goes, generally coincides with that of the Schools; though it confeſſedly receives a different aſpect from thoſe epiſodical diſſertations upon ſeveral philoſophical ſubjects which he hath interſperſed throughout that work in a very delightful manner. But if the peruſal of This and ſuch like treatiſes be poſtponed until a man hath regularly received a competent degree of knowledge from its proper ſources, he will be the better enabled to digeſt what is therein offer'd to his conſideration, and alſo to diſcern in what particulars his own knowledge is defective.

The turning over a variety of plans of beautiful buildings agreably ſketched out by the beſt Maſters can ſcarce give a man light into the principles of Architecture; Theſe are confeſſedly to be drawn from abſtract truths of Geometry, and [1] will always appear dry and tedious to a beginner. In the ſame manner, a young Logician is more concerned to enquire into the *form* than the *matter* of an Argument: And he

1 Omnium magnarum artium, ſicut arborum, altitudo nos delectat; radices & ſtirpes non item: ſed eſſe illa ſine his non poteſt. *Cic. de Orat.* L. 3. p. 333.

may

may be contented, if, at his firſt ſetting out to reaſon, he can by ſlow progreſs maſter a few eaſy ſubjects; if he can apprehend the order of argumentation in familiar inſtances, without being put out of his way by things of greater difficulty and leſs immediate uſe. And we may venture to aſſure him, that, if he can effectually reſolve to beſtow a moderate degree of attention upon what is fallen under the cenſure and ridicule of ſome parts of the preſent polite world, he may find his account in making the firſt regulation of his Underſtanding upon the old Plan. Novelty ſhould be no recommendation to any performance of this kind: For good ſenſe and truth being always the ſame, the received principles of reaſoning muſt be invariable, the ſame which ſerved *Cicero* and *Quinctilian*, with other great men in ſucceeding ages. And whatever praiſe is due to the ingenuity and improved learning of later Philoſophers, the exact method and accuracy of the old Syſtematical Logicians muſt be entitled to our praiſe and imitation.

If the manuals of this ſort of Logick do not always give ſufficient ſatisfaction to Learners, and thoſe the moſt eagerly inquiſitive, the reaſon of This is very plain. They are perhaps too large in their expectations, too ſanguine in their hopes, that the Treatiſe once learnt will inſtantaneouſly

taneouſly transfuſe into them the whole *Art of Reaſoning*. — And as well might they think of attaining the praiſe of Eloquence with all the elegancies of a correct ſtyle, from a Treatiſe of Grammar and Rhetorick. Or it may be, that the Treatiſe put into their hands is one of that ſort which is directly intended for an introduction to Scholaſtick Writers. Now, in this caſe, to ſtop as ſoon as we have gone through ſuch a Treatiſe, would be much the ſame as to peruſe the Grammar of any Language, without proceeding to the ſtudy of thoſe writings for which it was contrived: Our pains may ſeem ill employed; as tending only to furniſh us with a technical ſet of words and phraſes, without pointing out their uſe and application. — And yet, ſuch is the affinity between all languages, that the grammatical principles of any one, well underſtood, will much facilitate a man's improvement in any other: And in like manner, every man may ſafely promiſe himſelf the general advantage of being made acquainted with the conſtruction of true reaſoning from almoſt any of the Logical treatiſes, of which I am ſpeaking. But, whatever Manual of Logick be made uſe of, the general rules are, at firſt, to be got by rote: their uſe and meaning we ſhall more and more diſcover as we find occaſion to apply

them to particular caſes. Terms of Art muſt be jargon to thoſe by whom they are not underſtood; nor can they be underſtood, before our own obſervation, in the courſe of our ſtudies or of common life, ſhall have enabled us to ſee the juſtice of a general rule in its particular application. But ſurely it cannot bear a diſpute, Which is moſt adviſeable, Whether to form and methodize the notions of a young perſon by a ſet of rules ready fitted for his uſe, Or to leave him entirely to work at random in his firſt eſſays, and to ſtrike out a Syſtem of Logick for himſelf. It is therefore very unreaſonable to be diſcouraged by ſuch objections as equally affect all other Arts, that are delivered in a Doctrinal method.

Nay, is not every part of Education attended with ſome burdenſome [1] formalities, which are deſigned only to be of temporary uſe? — The genteeler kinds of youthful exerciſes, at the time of practice, certainly put the body under unnatural reſtraints: Yet this affected ſtiffneſs of the School quickly wears off in good company, and is ſucceeded by ſuch a ſettled gracefulneſs as well

1 Hoc tibi, Catule, perſuadeas velim me non multo ſecius facere, cum de Oratore diſputem, ac facerem, ſi eſſet mihi de Hiſtrione dicendum: negarem enim poſſe eum ſatisfacere in geſtu, niſi ſaltare didiciſſet. *Cic. de Orat.* L. 3. p. 258.

as

as ſtrength, as diſtinguiſhes the air of a [1] well-bred Courtier from the approach of an unmanaged, though perhaps well-proportioned, Ruſtick. The application is eaſy and juſt with regard to Logick; with this difference however, that the eye of every common ſpectator is a ready judge of the propriety of carriage; whereas it requires an improved Taſte to diſtinguiſh ſolid reaſoning from the irregular flights of a lively imagination.

Let a Young Gentleman conſider Logick as [2] a part of his Education not as his Profeſſion [3]: if it makes him acquainted with the inſtruments

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1 Sentio neminem eſſe in Oratorum numero habendum, qui non ſit omnibus iis artibus, quæ ſunt libero dignæ, perpolitus; quibus ipſis ſi in dicendo non utimur, tamen apparet atque exſtat, utrum ſimus earum rerum rudes, an didicerimus. Ut qui pilâ ludunt, non utuntur in ipsâ luſione artificio proprio palæſtræ, ſed indicat ipſe motus didicerintne palæſtram an neſciant. *id.* L. 1. p. 27.

2 Iſta diſcuntur facile, ſi & tantum ſumas quantum opus ſit, & habeas qui docere fideliter poſſit, & ſcias etiam ipſe diſcere. Sed ſi totâ vitâ nihil velis aliud agere, ipſa traductio & quæſtio quotidie ex ſe gignit aliquid, quod cum deſidiosâ delectatione veſtiges: ita fit ut agitatione rerum ſit infinita cognitio. Facilis uſus doctrinam confirmet, mediocris opera tribuatur, memoria ſtudiumque permaneat. *id.* L. 3. p. 259.

3 Non tantum ingenioſo homini, & ei, qui forum, qui curiam, qui cauſſas, qui remp. ſpectet, opus eſſe arbitror temporis, quantum ſibi ii ſumpſerunt, quos diſcentes vita defecit. Omnes enim artes aliter ab iis tractantur, qui eas ad uſum transferunt; aliter ab iis, qui ipſarum artium tractatu delectati nihil in vita ſunt aliud acturi. *Cic. de Orat.* L. 3. p. 258.

of reaſoning, and puts [1] his natural faculties into a regular diſpoſition, it fully anſwers its purpoſe: His real improvement in the art of Reaſoning will all along be proportioned to the progreſs, which he ſhall make in Science; as a man's grammatical ſkill will gradually encreaſe, while he continues to exerciſe himſelf in Language. If the niceties of Grammar are ſeldom underſtood, till after a large acquaintance with Authors of different ſtyles, ſo neither will thoſe of Logick, till the ſtudent's courſe of Reading ſhall have exemplified to him the various modifications of true reaſoning as well as the diſguiſes of what is falſe. The point before us therefore, is not, Whether or no it be deſirable that a young man may be furniſhed with [2] *all* the rules of ſound Reaſoning and juſt Criticiſm, but how to ſelect ſuch as he may be able to bear. And perhaps in ſettling what is neceſſary to a uſeful treatiſe of Logick, we ſhall do well to obſerve what All men allow to be reaſonable in

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1 Non reſpiciendum ad hæc, ſed in promptu habenda: nec tanquam tradita, ſed tanquam innata. Nam viam demonſtrare velociter ars poteſt, ſi qua eſt; verum ars ſatis præſtat, ſi copias eloquentiæ ponit in medio: noſtrum eſt uti eis ſcire. *Quinct.* L. 7. c. 10.

2 Tradi omnia quæ ars efficit non poſſunt. Nam quis pictor omnia quæ in rerum natura ſunt adumbrare didicit? Sed, percepta ſemel imitandi ratione, aſſimulabit quidquid acceperit. *Quinct.* L. 7. c. 10.

reſpect

reſpect of Grammar. In almoſt every particular language the *Pleonaſms*, *Ellipſes*, and other deviations from common form, are infinite. It is therefore very inexpedient for a Grammarian to fatigue himſelf or to perplex his Scholar by attempting a diſtinct enumeration of them: It may be ſufficient if he lays down the general rules of Orthography, Proſody and Syntax, and leaves the exceptions to further obſervation and experience. — And ſo may the Logician be eſteemed to acquit himſelf of his undertaking, if he conſiders all the parts of Reaſoning in a [1] general manner, and preſents the young Student with a plan how to methodize his notions, and to range them in the juſt order of a concluſive argument.

After ſuch a courſe of Inſtitution, if he has the common opportunities of improving his Rhetorick and his ſkill in other Sciences, (which ought always to be ſuppoſed when we would form a true eſtimate of the uſefulneſs of Logick) he will be under no neceſſity of peſtering his Audience or Company with the language of the Schools; though at the ſame time he will find here a compendious direction,

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1 Tradere deſtinamus — viam quandam atque rationem. Quibus demonſtratis non modo in exſequendo ſuas quiſque vires debet adhibere, ſed etiam inveniendo ſimilia, ut quæque conditio litium poſcet. *Quinct.* L. 5. c. 1.

how

how to apply his own knowledge, and how to examine the reaſonings of other men.

Upon the whole, Logick, as I have often repeated, has the ſame effect upon reaſoning, as Grammar has upon ſpeaking. The uſefulneſs of Both entirely depends upon their application. They are a kind of foundation to Wiſdom and Eloquence, which is not deſigned to appear above ground, though neceſſary to give ſtrength and ſupport to the fineſt Superſtructures. And, as a man habituated to a good ſtyle ſhall at length come to diſregard, and even to forget his Grammar rules, ſo is it [1] not uncommon to find good Reaſoners giving themſelves the air of ridiculing thoſe Logical forms, that at firſt ſerved to methodize their thoughts and ſtill influence the courſe of their Reaſoning.

The [2] Scholaſtick Logick is uſually divided into three parts; The *firſt* treating concerning

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1 Fuit hoc in utroque eorum, ut Craſſus non tam exiſtimari vellet non didiciſſe, quam illa deſpicere, & noſtrorum hominum in omni genere prudentiam Græcis anteferre. Antonius autem probabiliorem hoc populo orationem fore cenſebat ſuam, ſi omnino didiciſſe nunquam putaretur; atque ita ſe uterque graviorem fore, ſi alter contemnere, alter ne noſſe quidem Græcos videretur. *Cic. de Orat.* L. 2. p. 97.

2 *Agreable hereunto is* Cicero's *diviſion of Logick*; Ariſtoteles tradidit præcepta plurima differendi, & poſtea qui Dialectici dicuntur, ſpinoſiora multa pepererunt. Ergo eum cenſeo qui eloquentiæ laude ducatur, non eſſe earum rerum omnino rudem:— noverit primum vim, naturam, genera verborum & ſimplicium & copulatorum: deinde quot modis quidque dicatur: qua ratione verum

the nature of Words and their ſeveral kinds; — of general Ideas; — of the Predicaments; — of the rules of Diviſion, and Definition; with ſome rules of Criticiſm how to judge of the true meaning of Words.

II. — Of Propoſitions; — their parts; — and ſeveral kinds; — the different manner in which the ſame terms may be combined together; — and how far the truth of Propoſitions is thereby affected.

III. — Of Syllogiſms; — the general Rules of them; — and the particular Rules of each Figure and Mode; — irregular Syllogiſms and Fallacies; — the different kinds of Aſſent, and the Evidence upon which they depend.

The following reflexions will chiefly regard thoſe of the above-mentioned particulars againſt which exceptions are commonly made. For as to the uſefulneſs of knowing the rules of Criticiſm, in the *firſt* part, and the different kinds of Aſſent, with the Evidences upon which they depend, in the *third*, no one complains of any redundancy in the Scholaſtick treatiſes, but rather of the contrary.

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verum falſumne ſit, judicetur; quid efficiatur è quoque; quod cui conſequens ſit, quidque contrarium; cumque ambigue multa dicantur, quo modo quidque eorum dividi, explanarique oporteat. *Cic. Orat.* p. 326, 327.

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I obſerve then, that the *firſt* part of Logick is deſigned to *prepare* us for paſſing true judgments upon things; which can then only be done with certainty, when our Ideas are diſtinct, and our Words determinate in their ſignification.

And indeed, ſince it depends upon accident, what things we think or talk of firſt, we muſt expect no ſmall confuſion in the natural ſtate of our ideas: It will require ſome pains and attention to remove this inconvenience, and make them fit materials for reaſoning upon difficult ſubjects.

Moreover ſince Language is the great inſtrument whereby we not only communicate our ideas to other perſons, but alſo record and diſtinguiſh them within our own minds, it will be no inconſiderable ſtep towards avoiding miſtakes, to know the nature of words in general and their ſeveral kinds. — "There are many ſeemingly plain queſtions, which a man cannot anſwer, till their meaning [1] be diſtinguiſhed; Many Propoſitions, ſeemingly determinate, have

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1 Proprietates vocis cujuſque noſſe & ambigua aperire & perplexa diſcernere & de falſis judicare & colligere ac reſolvere quæ velis, Oratoris eſt: quanquam ea *(Scientia)* non tam eſt minute atque conciſe in Actionibus utendum quam in Diſputationibus. *Quinctil.* L. 12. c. 2.

more

more meanings than one, and are true or falſe, according to the ſenſe, in which they are taken. It is for want of the queſtion's being ſtated, and the terms defined, that a wrangle [1] is kept up by a verbal contradiction, each perſon meaning what he ſays, in a different reſpect [2]". It is this, that gives an artful man the opportunity of ſeeming plauſible to his followers, and working upon their paſſions by the miſapplication of ſpecious Names; and alſo, on the other hand, it is the want of clear and determinate ideas, that makes a well-meaning man grow ridiculous in his own conduct, and unreaſonably cenſorious of other men's.

To prevent therefore theſe ill effects [3], by *Definition* we ſettle within ourſelves, and explain

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1 Neceſſe eſt ideo nominis eſſe controverſiam, non quod de ipſa re non conveniat, non quod de facto non conſtet, ſed quod id, quod factum ſit, aliud alii videatur eſſe, & iccirco alius alio nomine id appellet. Quare — definienda res erit verbis & breviter deſcribenda. *Cic. de Invent.* L. 1. p. 20.

2 Mr *Norris.*

Cum accepto cauſſæ genere, & cognito, rem tractare cœpi, nihil prius conſtituo, quam quid ſit illud, quo mihi referenda ſit omnis illa oratio, quæ ſit propria quæſtionis. *Cic. de Orat.* L. 2. p. 134.

3 Facillime auditor diſcit, & quid agatur intelligit, ſi complectare à principio genus naturamque cauſſæ; ſi Definias, ſi Dividas, ſi neque prudentiam ejus impedias confuſione partium, nec memoriam multitudine. *Cic. Partit. Orat.* p. 322.

Ego id faciam, quod in principio fieri in omnibus diſputationibus oportere cenſeo, ut quid illud ſit, de quo diſputetur, explanetur; ne vagari & errare cogatur oratio, ſi ii, qui inter diſ-

 ſenſerint,

to others, what ideas we combine in any notion, or in the word, by which we repreſent it. By *Diviſion* we examine the ideas of others, or rejudge our own, by taking them to pieces; conſidering the Number of the parts, and the Order, in which they ſtand united: The Operation of the mind in both theſe caſes is much the ſame, and is as often to be repeated, as any danger of miſtake ſhall make it neceſſary; the object of it is only one ſingle notion at a time.

For this purpoſe [1] the doctrine of the *Predicables* or *Univerſals* may merit ſome attention, as

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ſenſerint, non idem eſſe illud, de quo agitur intelligent. *Cic. de Orat.* L. 1. p. 71.

Omnis—quæ à ratione ſuſcipitur de aliquâ re re inſtitutio, debet à definitione proficiſci; ut intelligatur, quid ſit id de quo diſputetur. *id. de Off.* L. 1.

Ego ſubtilitatem dividendi philoſophiâ digniſſimam puto. *id. Acad.* L. 4.

1 Quicquid eſt de quo ratione & via diſputetur, id eſt ad ultimam ſui generis formam, ſpeciemque redigendum. *Orat.* p. 302. Genus eſt id quod ſui ſimiles communione quadam, ſpecie autem differentes, duas aut plures complectitur partes, *ſeu* eſt notio ad plures differentias pertinens, ut, Animal, Cupiditas, Jus. — Pars autem eſt, quæ generibus iis ex quibus emanat ſubjicitur, *ſeu*, eſt notio cujus differentia ad caput generis & quaſi fontem referri poteſt; ut Homo, Equus; Amor & Avaritia; Lex, Mos, Æquitas. *de Orat.* L. 1. p. 64. — *Top.* p. 240. — *de Invent.* p. 13 & 172.

Sæpe eadem res alii Genus, alii Pars eſt: nam Homo Animalis pars eſt; Thebani aut Trojani Genus. *de Inv.* p. 172.

Quod Genere idem eſt fit aliud, quod parte quadam & Specie differat. e. g. *Occaſio* eſt pars temporis habens in ſe alicujus rei idoneam faciendi aut non faciendi opportunitatem." Quare cum Tempore hoc differt: nam Genere utrumque idem eſſe intelligitur;

it gives us the method, how to draw out any ſubject into a particular view; how to conſider accurately ſuch Natures as, though blended together in reality, are diſtinguiſhable by an act of the mind; and how to obſerve that ſimilitude, which may be found in ideas, that ſeem altogether different, and, again, the differences of thoſe, that ſeem alike.

The uſefulneſs of thus diſtinguiſhing things and ideas into their ſeveral parts, and marking them out by general names in conſequence thereof is very great. For, hereby we bring things that are very remote and independent of each other into one view; we [1] aſcertain *what* it is,

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tur; verum in Tempore ſpatium quodammodo declaratur, quod in annis aut anno aut aliqua anni parte ſpectatur: in Occaſione ad ſpatium Temporis faciendi quædam opportunitas intelligitur adjuncta. *de Inv.* L. 1. p. 177.

Definitio Genere declaratur & Proprietate quadam, aut etiam Communium frequentia: ex quibus proprium quid ſit eluceat. Sed quoniam de propriis oritur plerumque magna diſſenſio, definiendum eſt ſæpe ex contrariis, ſæpe etiam ex diſſimilibus, ſæpe ex partibus. *Partit. Orat.* p. 291.

This doctrine is uſually aſcribed to *Porphyrius*; but though the Greek Treatiſe prefixed to *Ariſtotle*'s Organon be His, yet from *Cicero*, *Quinctilian* and *Seneca* the doctrine appears to have been much older. See *Senecæ* Epiſt. 58.

1 e. g. An Ego tibi obviam non prodirem? primum *Appio Claudio?* deinde *Imperatori?*—deinde—*amico?*—Illud idem—dicebat te dixiſſe: Quidni *Appius Lentulo*, *Lentulus Appio* proceſſit obviam: *Cicero Appio* noluit? Quæſo etiamne tu — ullam *Appietatem* aut *Lentulitatem* valere apud me plus quàm ornamenta virtutis putas? *Cic. Fam.* Ep. 7. L. 3.

that we at any time conſider, and in *what reſpect*; we become more diſtinct in our thoughts, and expreſs ourſelves more intelligibly, when we come to examine and pronounce concerning the agreement of one thing with another: thus, we often find it convenient to conſider the nature and acts of the *Will*, as this faculty is contradiſtinguiſhed from the *Underſtanding*, though they are both of them inſeparably united in the human Soul; we conſider a man's *virtue* at one time, his *wiſdom* at another; *one* kind of wiſdom without *another*; and at the ſame time that we juſtly applaud his ſkill in *Phyſick* &c. very juſtly condemn his ignorance in *Divinity*, *Law* &c.

Whether the School-men have been right or wrong in their application of the terms, *Genus*, *Species* &c. or in aſſigning their proper *Eſſences* to things in virtue of that doctrine; (as indeed it is ſcarce poſſible for us not to be ſometimes miſtaken, and perhaps alſo to run into ſome inconvenience by ſuch miſtake;) or, whether their reaſoning concerning the nature of *Univer-*

However the uſe of ſuch abſtract terms as *Animalitas*, *Humanitas*, *Corporeitas* has been ridiculed, yet here they certainly have a clear meaning: and if there be no abſurdity in conſidering any individual as to his being an *Animal*, *a Man* &c. why may not an abſtract term be coined to expreſs that abſtract idea, *Animalitas*, *Corporeitas* &c. as well as here *Lentulitas*, *Appietas?*

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ſals be well grounded or no; yet thus much is certain, that ſince all [1] explications of words and things, all reaſoning [2] depends upon the help of general ideas and general terms; it will be uſeful, if not neceſſary, for the ſake of memory and order, to have ſome certain claſſes, wherein, after being compared and ſorted, they may be ſet together: — How far any diviſions or ſubdiviſions are to be purſued, or which parts deſerve a particular conſideration, is a point of diſcretion, which will admit of various determinations according to the reſpective nature and circumſtances of the matter under examination, and the diſtinct views, in which it is to be conſidered. But without ſome ſuch method of diſtinction, we could not aſcertain our notions, ſo as to reaſon and diſcourſe intelligibly about them;

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1 Finitioni ſubjecta maxime videntur (i. e. *ad rem definiendam conducunt*) Genus, Species, Differens, Proprium. *Quinct.* L. 5. c. 10.

2 Omnes Controverſiæ ad Univerſi generis vim & naturam referuntur. *Cic. de Orat.* L. 2. p. 140.

In omni ſpeciali utique ineſt generalis, ut quæ ſit prior. *Quinct.* L. 3. c. 5. — ut non eſt ſatis generalem tractaſſe quæſtionem, ita perveniri ad ſpeciem, niſi illa prius excuſſa, non poteſt. *ib.*

Illa pars orationis, quæ eſt de genere Univerſo, totas ſæpe cauſas continet. *Cic. Orat.* p. 329.

Omnia fere quæ ſunt concluſa nunc artibus, diſperſa & diſſipata quondam fuerunt. — Adhibita eſt igitur ars quædam extrinſecus ex alio genere quodam, quod ſibi totum Philoſophi ſumunt, quæ rem diſſolutam divulſamque conglutinaret, & ratione quâdam conſtringeret. *Cic. de Orat.* L. 1. p. 64.

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we could not be certain, when we write with method, nor examine, either how far others obſerve it, or how much of their ſubject they have exhauſted. And agreably hereto we find, that Naturaliſts generally purſue this method of reducing within the compaſs of regular examination, that almoſt infinite variety of Foſſils, Plants, Animals, &c. which fall under their notice.

And I cannot help inſiſting upon it, that it will abundantly reward the pains of a young Student to habituate himſelf to the method of drawing out the ſubject-matter of any rational Diſcourſe by the way of Analyſis: Nothing can ſo well direct his Judgment in reviewing either his own larger Compoſitions, or thoſe of other men. Only let him remember, that this Logical ſkill is not to exclude, nor can it ever ſupply the want of, any other branch of uſeful knowledge; and that, whenever he ſpeaks or writes to the Publick, he ſhould leave behind him every ſcholaſtick [1] barbariſm, and endeavour to animate his ſentiments with as free an indulgence of Fancy as may be conſiſtent with juſt Thought, cloathing All with the graceful colour and comelineſs of elegant expreſſion. Rea-

1 Such as we find in ſome ſenſible writers in the reigns of K. *J.* I. and *C.* I.

ſoning

ſoning ſhould never make its appearance beyond the Study in the lifeleſs form of a Skeleton; or, at moſt, only to direct the [1] Eye and aſſiſt the Judgment of the Reader; to let him know What he is to expect, appealing to his Reaſon, whether juſtice be done to the whole ſubject or not.

The deſign of *Ariſtotle* being to clear away the perplexities, in which the *Sophiſts* of his time had involved the art of reaſoning, many of the obſervations, which occur in the firſt part of his Logical works, ſeem intended to facilitate the apprehenſion of his rules, and to ſecure himſelf from the attacks of that ſet of men, and are therefore in a great meaſure relative to them. As for the *Predicaments*, He does not ſeem to have laid any great ſtreſs on the diviſion itſelf, nor to have offered it to the world, as an extraordinary diſcovery. Some of his obſervations here, as well as in the introduction, are evidently critical upon the Greek language. And in-

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1 Thus, You have the ſubſtance of Bp *Sanderſon*'s ten *Prælectiones de Conſcientia* sketch'd out in a ſingle page uſually prefixed thereunto. The ſame method may be of excellent uſe in ſtudying our Bibles; particularly St. *Paul*'s Epiſtles; Inſtances of which ſort of Analyſis, though perhaps too tediouſly minute, may be ſeen in the Engliſh tranſlation of *Diodati*'s Bible. The ſame method has been uſefully applied to delineate within the compaſs of a ſhort view the argumentative parts of *Cicero*'s Orations. See *Freigius*'s Edition.

deed

deed ſuch is the [1] connexion between thinking and ſpeaking, that [2] Logick and philoſophical Grammar muſt often coincide. Though there is a neceſſary order eſtabliſhed in our thoughts by nature, yet the method of expreſſing them to others, or diſtinguiſhing them within ourſelves, muſt in ſome meaſure partake of the peculiarities of the language, which is made uſe of for thoſe purpoſes. Hence many obſervations and diſtinctions, which might be pertinent in Greek and Latin, [3] would ſound ſtrange and trifling to an Engliſh ear. And perhaps the Schoolmen cannot alway ſtand clear of having overſtrained their point, in preſſing ſome obſervations into the ſervice of the Latin tongue, which were uſeful only in the Greek. And it is ſuppoſed, that other of their miſtakes may have ariſen from faulty tranſlations of *Ariſtotle*'s Works made by ſome Arabian Philoſophers; from whence the miſtakes were continued in the Latin.

Moreover, if ſome other remarks, occurring in his treatiſe of the *Predicaments*, are adapted

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1 Cum omnis ex re atque verbis conſtet oratio, neque verba ſedem habere poſſunt ſi rem ſubſtraxeris, neque res lumen, ſi verba ſemoveris. *Cic. de Orat.* L. 3. p. 235.

2 See this matter handled in a maſterly manner in Mr. *Harris*'s Hermes.

See alſo *Grammaire Francoiſe* par le *P. Buffier.*

3 The doctrine of *Equipollency of Propoſitions*, to be met with in common Latin manuals of Logick, is of this kind.

to the following parts of the *Ariſtotelick* philoſophy; they are become leſs material to us, with whom the ſtate of philoſophy, *Natural*, *Moral*, and *Metaphyſical*, is much altered in the moſt important articles, if not in its very principles: the two laſt by Chriſtian Theology; and the former, by the new method of experimental obſervations illuſtrated by Mathematical reaſoning. The remarks, which are of more general uſe, are coincident with the doctrine of the *Predicables*, and may therefore be as well taken notice of under that head. And therefore ſhould the Learned think fit to diſcard this ſeries, we may be contented with ſuch an account of it, as may barely ſuffice to make ſome valuable writers intelligible, whoſe manner of treating their ſubjects is formed upon the plan of that diviſion. — But ſtill they, who are maſters of ſcholaſtick language, may uſefully aſſiſt their invention, by having recourſe to this ſeries, drawn out into its moſt minute particulars, as a collection of general heads, which repreſent the ſeveral views, in which any ſubject may be conſidered.

For how much ſoever the *Predicaments* may have been expoſed to ridicule by the fond extravagance of ſome Admirers, yet a better claſs

of general heads does not often occur[1]. To mention no other inſtances, let any matter of fact come before a Lawyer; in what views can

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1 In eo eſt *Status* cauſſæ (i. e. *caput generale, ad quod probationes partium referantur,)* quod eſt in eo potentiſſimum, & in quo maxime res vertitur. — *Ariſtoteles* decem elementa conſtituit, circa quæ verſari videatur omnis quæſtio; Οὐσίαν ſeu *Eſſentiam*, neque ſane aliud eſt ejus nomen Latinum; Eâ quæritur *an Sit*; *Qualitatem*, cujus apertus intellectus (ſeu *ſignificatio)* eſt. *Quantitatem*, quæ dupliciter à poſterioribus diviſa eſt; quam magnum & quam multum ſit. *Ad aliquid*, unde ductæ *tranſlatio* & *comparatio* (ſc. *an huic jus agendi ſit, vel facere aliquid conveniat, an contra hunc, an hoc tempore, an ſic.)* Poſt hæc *Ubi* & *Quando*; deinde *Facere, Pati*; *Habere*, quod eſt quaſi armatum eſſe & veſtitum eſſe; Noviſſime Κεῖσθαι, quod eſt compoſitum eſſe quodammodo, ut, *ſedere, ſtare, jacere.* Sed ex his omnibus prima quatuor ad *Status* pertinere, cætera ad quoſdam *locos* argumentorum videntur. — *And ſoon after, (though he chuſes to expreſs himſelf in a different manner from what ſome other Rhetoricians uſually did,) the Claſs of general heads, which he adopts as the beſt, is very nearly the ſame with the Predicamental.* — Credendum eſt iis, quorum auctoritatem ſecutus eſt Cicero, tria eſſe, quæ in omni diſputatione quærantur, *An ſit, Quod ſit, Quale ſit*; quod ipſa nobis etiam Natura præſcribit. Nam primum oportet ſubeſſe aliquid, de quo ambigitur, quod, *quid* ſit, *quale* ſit, certe non poteſt æſtimari, niſi prius *eſſe* conſtiterit; Ideoque ea eſt prima quæſtio: Sed non ſtatim, quod *eſſe* manifeſtum eſt, etiam *quid* ſit apparet. Hoc quoque conſtituto, noviſſima *qualitas* ſupereſt: nec his exploratis aliud eſt ultra. — At *quantum* & *quam multum*, & *ad aliquid* & (ſuppl. "*cauſæ ſtatus*") *comparativus* — ſemper in parte aut *conjecturæ* aut *qualitatis* ponenda ſunt, (i. e. *ſpecialem quæſtionis oratoriæ* ſtatum *non conſtituunt, ſed ad quæſtionem de* facto *aut* qualitate *revocantur)* ut *qua mente*, & *quo tempore, quo loco* (ſuppl. *quis quid fecerit.)* *Quinct.* L. 3. c. 6.

So *Cicero*, Omnis res quæ habet in ſe poſitam in diſceptatione aliquam controverſiam, aut facti aut nominis aut generis aut actionis continet quæſtionem: — *Facti*, præteriti, quod fiat, quod futurum ſit: *Nominis*, cum quid factum ſit convenit, quo id factum nomine appellari oporteat quæratur; ut ſiquis ſacrum ex privato ſumpſerit, utrum fur an ſacrilegus ſit judicandus: — *Generis*, cum conſtat de facto & nomine, & tamen quantum & cujuſmodi

it offer itſelf to his conſideration more naturally, than in the *Predicamental? viz.*

Whether it *was done*, and what it *is?* *(Subſtantia.)*

What are its *qualities*, good or bad? *(Qualitas.)*

In *what degree?* *(Quantitas.)*

How is it found upon *compariſon* with *other things?* *(Relatio.)*

Who was the *Doer?* *(Actio.)*

Who was the *Sufferer?* *(Paſſio.)*

How it appears in point of *Time*, when? *(Quando.)*

— *Place*, where? *(Ubi.)*

— *Poſture*, in which it was done? *(Situs.)*

— Other *incidental* circumſtances attending it? *(Habitus.)*

IN THE SECOND part of Logick is conſidered the Agreement and Diſagreement of ideas, as ſignified by *Affirmation* and *Negation.*[1]

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juſmodi omnino quale ſit quæritur; hoc modo, juſtum an injuſtum, utile an inutile &c. — *Actionis*, cum cauſa ex eo pendet, quod non aut is agere videtur quem oportet; aut non cum eo quicum oportet; aut apud quos, quo tempore, qua lege, quo crimine, qua pæna oportet. Horum aliquem in omne cauſæ genus incidere neceſſe eſt. Nam in quam non inciderit, in ea nihil eſſe poterit controverſiæ. *de Invent.* L. 1. p. 155, 156, 157 *a little tranſpoſed.*

1 De perceptione hactenus: — nunc de aſſentione, atque approbatione pauca dicamus: non quod non latus locus ſit: ſed paullo ante jacta ſunt fundamenta. *Cic. Acad.* L. 4. p. 18.

And here, the general doctrine of *Propoſitions*, though it be obvious to any man of common capacity and ordinary attention, deſerves to be drawn out into diſtinct rules. For want of taking a little pains to imprint ſomething of this kind diſtinctly upon their memories, men of quick parts are often at a loſs to ſay, how far an aſſertion extends, and what is implied in it: They apprehend ſome propoſitions to be inconſiſtent, others to be equivalent, and convertible[1], which really are not ſo; and thereby groſly o-

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The reaſon why we meet with ſo few obſervations in *Cicero* directly applicable to the *ſecond* part of Logick may be ſeen *de Orat.* L. 3. p. 244, 245. Neque vero diſputemus, quibus rebus aſſequi poſſimus, ut ea, quæ dicamus intelligantur. — Nemo enim extulit eum verbis, qui ita dixiſſet, ut qui adeſſent, intelligerent quid diceret, ſed contemſit eum, qui minus id facere potuiſſet. *But Orator* p. 171. *He mentions it as one of the* tenenda Oratori, apud Dialecticos quærendum, quot modis quidque dicatur, quâ ratione verum falſumne ſit judicetur," which paſſage evidently refers to ſomething diſtinct from the *third* Operation of the Mind, or Reaſoning properly ſo called.

1 Men, whoſe notions of things are ſuperficial and partial, are apt to fall into great miſtakes by not attending to the Logical rule; thus, becauſe *All popiſh Churches are Epiſcopal* and *have ceremonies*, they infer that *every Church which is Epiſcopal, or hath ceremonies is popiſh.*

Again, the difference between *contrariety* and *contradiction* ſhould be the more carefully obſerved, as it is common enough to find the two contending parties in a debate to be Both of them miſtaken while they maintain *contrary* poſitions. So likewiſe, as to *ſub-contrary* propoſitions, Men expreſſing themſelves indefinitely ſuppoſe that their aſſertions are inconſiſtent with each other, when, if rightly explained, they may be both of them very true.

verſhoot

verſhoot themſelves, when they come to judge, and draw concluſions from given premiſſes.

THE THIRD part contains the doctrine of *Syllogiſms*; whereby we learn how to compare ſucceſſively two ideas with a third, in order to ſee, how far they agree or diſagree with that, and conſequently with one another.

It may be obſerved here, how mutually ſubſervient the three parts of Logick are to each other. Experience may convince us, that our miſtakes in *Judging* and *Reaſoning* take their riſe as frequently from our want of care in conſidering the ideas of *ſimple Apprehenſion*, as from our combining them improperly, or making inferences in a wrong form. Before we offer to pronounce concerning the agreement or diſagreement between ideas, we ſhould carefully examine into their nature, and ſettle preciſely what is implied in them: But in many caſes, eſpecially thoſe, that are remote from common obſervation, it depends upon the due exerciſe of our *Judgment* and *Reaſoning* to ſettle thoſe ideas, which when conſidered ſingly are the object of *ſimple Apprehenſion*. If a Ruſtick judges and reaſons wrong upon matters of Religion, Philoſophy, and Politicks, it is in a great meaſure owing to his not having preciſe and juſt ideas of what

what he pretends to be a judge of: On the other hand, it is ſcarce poſſible for any man to ſettle and aſcertain his Ideas in ſuch Matters, without a previous exerciſe of his underſtanding, in comparing things together, obſerving their agreement or diſagreement, and drawing inferences for that purpoſe: And conſequently, a Man muſt not expect to find himſelf a thorough Maſter of the firſt part of Logick, 'till he ſhall have made ſome proficiency in the uſe of ſecond and third.

Now it muſt be own'd, that in diſcourſe upon [1] ordinary matters, we have no occaſion, either to put ourſelves to the trouble of continually applying a common ſtandard, or [2] to tie our-

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1 In rebus — apertis argumentari tam ſit ſtultum, quam in clariſſimum ſolem mortale lumen inferre. *Quinct.* L. 5. c. 12.

2 Ego, ut in oratione Syllogiſmo quidem aliquando uti nefas non duco; ita conſtare totam, aut certe confertam eſſe *aggreſſionum & enthymematum* ſtipatione minime velim. Dialogis enim & dialecticis diſputationibus erit ſimilior, quam noſtri operis actionibus: quæ quidem inter ſe plurimum differunt. Namque illi homines docti, & inter doctos verum quærentes, minutius & ſcrupuloſius ſcrutantur omnia, & ad liquidum confeſſumque perducunt. — Nobis ad aliorum judicia componenda eſt oratio, & ſæpius apud omnino imperitos, atque aliarum certe ignaros literarum loquendum eſt; quos niſi & delectatione allicimus, & viribus trahimus, & nonnunquam turbamus affectibus; ipſa, quæ juſta ac vera ſunt, tenere non poſſumus. *id.* c. 14. *which latter clauſe, while it ſhews the inexpediency of an Orator's confining himſelf upon* all *occaſions to ſtrict Logical form, evidently points out its uſefulneſs, when we* impartially *examine, or explain any Subject.*

ſelves

ſelves up to the ſtrictneſs of Scholaſtick form, in order to perceive the agreement or diſagreement above-mentioned: Nor can it be any great edification to an inquiſitive Student to be told in ſuch variety of form, as ſometimes he is in treatiſes of Scholaſtick Logick, that *Man is an Animal.* But yet he may find his account [1] in learning thoſe general rules, which are applicable, as a teſt, to all reaſoning, however varied or diſguiſed by the advantage of witty turns and good Language. "Syllogiſm is a meaſure to us in the management and diſpoſal of our own thoughts, and in our reaſonings and diſcourſes to others; wherein we cannot otherwiſe avoid [2] confuſion and diſorder, than by conſidering, what the concluſion is we would prove; by what mediums we would prove it; and to which part of the argument, *(Major, Minor* or *Concluſion)* this or that particular part of our diſcourſe relates: If our diſcourſe be not always laid out in the exact formality of Syllogiſm, yet we ſhould have a kind of Syllogiſtical plan before us; that ſo in

1 Ad inventionem argumenti, abſolutio quoque argumentandi adjungatur; & magnâ cum curâ & diligentiâ locus hic omnis conſiderandus eſt. *Cic. de Invent.* L. 1. p. 183.

2 Artis eſt — ea (ſc. *breviter exponere & probabiliter* &c.) efficere non perturbate, ſed ſingulis argumentationibus ita concludendis, ut efficiatur quod ſit conſequens iis, quæ ſumentur ad quamque rem confirmandam. *Cic. Orat.* p. 328.

every

every ſtage of our diſcourſe, we may know where-about we are, and what we are doing.

Syllogiſm moreover will be a meaſure whereby to [1] judge of the diſcourſes of others; pointing out what is the concluſion, they offer to prove; what the premiſſes are, whereby they prove it; and whether ſuch premiſſes do indeed prove ſuch concluſion. By reducing it to Syllogiſm, You ſee all the parts of an argument in miniature; what truly belongs to it; and what is put in only for ſhew, and pomp, and amuſement; and every part in its proper place and order, and withal what connexion one part has with another [2]."

And indeed ſo natural is this form of argumentation, that not only in caſes of *Divinity* and *Metaphyſicks*, but in *Law* likewiſe, all reaſoning, if pertinent and concluſive, muſt, after a due ſeparation of parts, be finally reſolvable into it. In ſtating the Legality or Illegality of any action, the Law itſelf, whereby the nature of it is eſtimated, is truly the *Major* of a Syllogiſm, and the application of the Action to it, is a real *Minor*.

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1 Ego autem arbitror, quanquam admodum delectatus ſum oratione ejus perpetuâ, tamen commodius, cum in rebus ſingulis inſiſtas, & intelligas, quid quiſque concedat, quid abnuat, ex rebus conceſſis concludi quid velis & ad exitum perveniri. *Cic. de Fin.* L. 2. p. 51.

2 Mr. *Norris.*

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The ſame may be ſaid of Demonſtrations, properly [1] Mathematical, concerning Number, Extenſion, and Figure; only with this difference, that by the help of viſible figures and diagrams, a man is enabled, both readily to apprehend and retain a continued chain of deductions in a ſeries of *Enthymems*, without drawing out Both premiſſes into a complete form.

Indeed, "Mathematics (to uſe the words of an excellently learned and ingenious Writer [2]) are the nobleſt praxis of Logic, or Univerſal Reaſoning. Tis through them we may perceive how the ſtated Forms of Syllogiſm are exemplified in one Subject, namely, the predicament of Quantity. By marking the force of theſe Forms, as they are applied *here*, we may be enabled to apply them ourſelves elſewhere. Nay, by viewing the Mind, during its proceſs in theſe ſyllogiſtic employments, we may come to know in part, what kind of Being it is; ſince Mind, like other Powers, can be only known from its Operations. Whoever therefore will ſtudy Mathematics in this view, will become not only by Mathematics a more expert Logician, and by Logic a more rational Mathemati-

1 Quid? Illa propoſitarum quæſtionum (ſc. *in Geometria*) concluſio non tota fere conſtat Syllogiſmis? *Quinct.* L. 1. c. 10.

2 Mr. *Harris* in his *Hermes.*

cian, but a wiſer Philoſopher, and an acuter Reaſoner, in all the poſſible ſubjects either of ſcience or deliberation. But when Mathematics, inſtead of being applied to this excellent purpoſe, are uſed not to exemplify Logic but to ſupply its place; no wonder if Logic paſs into contempt, and if Mathematics, inſtead of furthering Science, become in fact an obſtacle. For when men, knowing nothing of that Reaſoning which is univerſal, come to attach themſelves for years to a ſingle Species, a ſpecies wholly involved in lines and numbers only, they grow inſenſibly to believe theſe laſt inſeparable from all Reaſoning."

As for the [1] *Matter* of Argumentation, Logicians as ſuch, cannot pretend to offer much aſ-

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1 *Accordingly* Antonius *ſays of it by way of reproach*, In hac arte — nullum eſt præceptum quomodo verum inveniatur, ſed tantum eſt quo judicetur. *Cic. de Orat.* L. 2. p. 83.

At quomodo inveniemus illas occultas quæſtiones (ſc. *quæ ſunt ex litis alicujus proprietate eruendæ?)* ſcilicet quomodo ſententias, verba, figuras, colores; ingenio, cura, exercitatione. *Quinctil.* L. 7. c. 1.

Si tu mihi quamvis eruditum hominem adduxeris, quamvis acrem & acutum in cogitando, — ſi erit idem in conſuetudine civitatis, in exemplis, in inſtitutis, in moribus ac voluntatibus civium ſuorum hoſpes, non multum ei loci proderunt illi, ex quibus argumenta promuntur. *Cic. de Orat.* L. 2. p. 139.

— Animos atque ingenii celeres motus, qui ad excogitandum apti & ad explicandum ornandumque ſint uberes & ad memoriam firmi atque diuturni, arte accipi poſſe, falſum eſt: præclare enim ſe res habet, ſi hæc accendi, aut commoveri arte poſſint; inſeri quidem, & donari ab arte non poſſunt omnia: ſunt enim illa dona naturæ. *Cic. de Orat.* L. 1. p. 39.

ſiſtance.

ſiſtance. They obſerve only, and that truly enough, that whoever reaſons upon any ſubject, muſt draw his argument, either from its more [1] general or particular nature, or from ſomething peculiar to the individual, which he conſiders, whether intimately and eſſentially united to it, or [2] accidentally connected with, or reſulting from it.

And in this view, they reckon up the moſt material conſiderations of things, [3] ſuch as *Cauſe*, *Effect*, *Object*, *Adjunct*, &c. aſſigning to each ſuch maxims or propoſitions, as all men may be ſuppoſed to agree in, and which therefore are ſuited to the purpoſes of [4] artificial diſputation, and uſeful for conviction.

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1 Argumenta reperiuntur, aut in quæſtionibus, quæ etiam ſeparatæ à complexu rerum perſonarumque ſpectari per ſe poſſunt; (*Græce* θέσεις dict. *Quinct.* L. 3. c. 5.) aut in ipſâ cauſſâ, cum invenitur aliquid in eâ, non ex communi ratione ductum, ſed ejus judicii, de quo cognoſcitur, proprium. (Græce ὑποθέσεις dict. *Quinct.* L. 3. c. 5.) *Quinct.* L. 5. c. 8.

2 *Thus in arguing upon any caſe of Adultery*, &c. Communes loci — ab illo generali tractatu (ſc. *quo peroratur in ipſa vitia citra Perſonas*) ad quaſdam ſpecies deduci ſolent, ut ſi ponatur Adulter cæcus, Aleator pauper &c. *Quinct.* L. 2. c. 4.

3 The ſeveral Topicks of Argumentation with inſtances are ſpecified *Cic. de Orat.* L. 2. p. 150. to which on many accounts, it ſeems more adviſeable to refer the young Learner, than to thoſe that are given by the Scholaſtick Logicians.

4 Iſti, qui docent, cum cauſſas in plura genera ſecuerunt, ſingulis generibus argumentorum copiam ſuggerunt. Quod etiamſi ad inſtituendos Adoleſcentulos magis aptum eſt, ut, ſimul ac poſita ſit cauſſa, habeant quo ſe referant, unde ſtatim expedita poſ-

And indeed, when [1] we have found our obſervations hold good in many particular inſtances, we may afterwards with ſome aſſurance uſe them, both as compendious heads, under which to [2] common-place our knowledge, and as principles of argumentation, about all things of the ſame ſort. And in this view it is that Mathematicians uſually premiſe before their Demonſtrations certain Axioms or Maxims, that the Reader having familiarized to his mind theſe propoſitions made in ſuch general terms, may have them in readineſs for application to particular caſes afterwards. In like manner, the Scholaſtick Maxims till after [3] ſome experience, will not always appear intelligible, nor be eaſily ſtated, as the different ſubjects, to which they are

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ſint argumenta depromere; tamen tardi ingenii eſt, rivulos conſectari, fontes rerum non videre. *Cic. de Orat.* L. 2. p. 135.

1 Hæc non idcirco dico, quod inutilem horum locorum, ex quibus argumenta ducuntur, cognitionem putem: — ſed ne, ſi qui cognoverint iſta, ſi cætera negligant, perfectos ſe protinus atque conſummatos putent. *Quinct.* L. 5. c. 10.

2 Loci communes appellati, quod videntur multarum iidem eſſe cauſſarum; ſed proprii ſingularum eſſe debebunt. *Cic Orat.* p. 329.

Loci communes, niſi ab iis, qui multâ exercitatione magnam ſibi & verborum & ſententiarum copiam comparaverint, tractari non poterunt ornate & graviter quemadmodum natura ipſorum deſiderat. Atque hoc ſit nobis dictum communiter de omni genere locorum communium. *Cic. de Invent.* L. 2. p. 233.

3 Hi Loci ei demum Oratori prodeſſe poſſunt, qui eſt verſatus in rebus vel uſu, quem ætas denique affert; vel auditione & cogitatione, quæ ſtudio & diligentia præcurrit ætatem. *Cic. de Orat.* L. 2. p. 139.

to be applied, require. Thoſe, which want either clearneſs or connexion, may be apt to burden the memory; and as for the reſt, which are confeſſedly ſelf-evident, they will at any time approve themſelves to every man's underſtanding.

As for *Method*[1] or the art of diſpoſing the ſeveral parts of a larger train of reaſoning, with perſpicuity, and eaſe, and pertinency to ſome important concluſion, it is not to be expected in any greater degree from the precepts of a Logician, than the excellence of a good ſtyle can be from thoſe of a Grammarian. A man of abſtruſe reflexion may indeed reduce the [2] ſeveral niceties, as well as more common beauties of argumentation, to ſettled rules; but the benefit to be received from thence, will not probably be equivalent to the trouble of learning them,

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1 Diſpoſitio eſt utilis rerum & partium in locos diſtributio. *Quinct.* L. 7. c. 1. — ſi certa aliqua via tradi in omnes materias ullo modo poſſet, non tam paucis contigiſſet. Sed, cum infinitæ litium formæ fuerint, futuræque ſint, & tot ſeculis nulla reperta fit cauſſa, quæ eſſet tota alteri ſimilis, ſapiat oportet Actor, & vigilet, & inveniat, & judicet, & conſilium à ſeipſo petat. *id. Præfat. ad* L. 7.

2 Quidam executi ſunt verboſius — quo quæque res modo dici poſſet, oſtendere: ſed mihi ſupervacuum videbatur. Nam & fere apparet, quid — dicendum ſit. Et de omnibus omnia dicere infinitum eſt, tam hercule, quam ſi controverſiarum, quæ ſunt, quæque futuræ ſunt, quæſtiones, argumenta, ſententias, tradere velim. *Quinct.* L. 5. c. 12.

or to the perplexity, that will attend the uſe of them.

To think maſterly of any ſubject, and adjuſt our thoughts with elegance, will require a conſiderable time; and is the effect not ſo much of rule, as of habitual exerciſe in the converſation and writings of [1] good reaſoners. If the difference of imagination in different men did not render the train, and turn of their ſentiments different, according to each writer's peculiar genius; yet the manner of purſuing an enquiry, and ranging our thoughts, ought to be [2] diverſified upon different ſubjects. Rules drawn out in this view would be different, with reſpect to every different Author; and muſt at all times be [3] fitted to the particular reaſoning, whereof they contain the analyſis: And however uſeful an analyſis may be to facilitate our underſtanding a

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1 Quæ cum abs te modo commemorarentur *(Antony had been giving a draught of one of his own pleadings,)* equidem nulla præcepta deſiderabam. Iſtam enim artem demonſtrationem defenſionum tuarum abs te ipſo commemoratam, doctrinam eſſe non mediocrem puto. *Cic. de Orat.* L. 2. p. 164.

2 Id quidem perſpicuum eſt, non omni cauſſæ, nec auditori, neque perſonæ, neque tempori congruere orationis unum genus. *id.* L. 3. p. 309.

Nemo à me exigat id præceptorum genus, — ut quaſi quaſdam leges immutabili neceſſitate conſtrictas ſtudioſis feram. *Quinct.* L. 2. c. 13.

3 Omnem collocationem ad finem accommodo quæſtionis. *Cic. Partit. Orat.* p. 285.

In Judiciis non eadem eſt collocatio Actoris & Rei. *id* 290.

book

book already written, yet, I believe, few men could ſucceed in writing, through a ſcrupulous obſervance of any [1] other general plan, than what they themſelves have drawn.

It may be time enough, if we take our directions occaſionally in our paſſage through the arts and ſciences, how to reſolve our notions into a ſeries of cauſes and effects; and how to purſue them through ſeveral conſequences, deductions, and complex notions, 'till they are at laſt formed into regular Schemes and rational Syſtems: The uſe of Logick at the ſame time muſt even here be confeſſed to be conſiderable, though it teacheth us no more, than to take a ſingle ſtep with caution and ſecurity; though it ſupplies us only with a rule, whereby to meaſure any ſingle parts of our reaſoning, and bring their ſtrength ſucceſſively to the teſt.

To return therefore to the proper province of a Logician; The ſcholaſtick doctrine of Syllogiſms is confeſſedly very ingenious. It is not here adviſed, that the young Student ſhould car-

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1 Illa potentiſſima eſt, quæque vere dicitur *Oeconomica* totius cauſſæ diſpoſitio, quæ conſtitui, niſi velut in re præſenti, non poteſt; ubi aſſumendum proœmium, ubi omittendum &c. — Hæc — præſtat omnia, cui affuerint, natura, doctrina, ſtudium. Quare nemo exſpectet, ut alieno tantum labore ſit diſertus. Vigilandum ducat, iterum enitendum, pallendum: Eſt facienda ſua cuique vis, uſus, ſua ratio. *Quinct.* L. 7. c. 10.

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ry his Logical ſpeculations ſo far as, with *Ariſtotle*, to trace out the almoſt infinite modes and connexions of the Syllogiſtick terms. Enough for his common uſe is comprized within three or four technical lines, of no great burthen to the memory, and of no ſuch intricacy and obſcurity, but that a Scholar of moderate apprehenſion may eaſily acquaint himſelf with them. But perhaps nothing can do this ſo effectually, as a little exerciſe in Scholaſtick Diſputations. Thoſe, that are ſtrictly Logical, are intended to habituate a Young beginner both to the uſe of Logical terms, and an acquaintance with its rules. The principles of the debate, and the preciſe explication of the words to be made uſe of, being ready drawn out to his hand by Logical writers; he will have no intricacy in his ſubject to fatigue his invention, and may therefore more eaſily attend to the form of argumentation, obſerve its accuracy, or correct it when deficient.

And therefore, though we admit, in general, that a man ought to be a Maſter of any art, before he preſumes to decide concerning the nature or juſtice of its rules; Yet, in this view[1], the

1 Omnino omnis Argumentatio, & ejus reprehenſio majorem quandam vim continet, & latius patet, quam hic exponitur: Sed ejus artificii cognitio hujuſmodi eſt, ut non ad hujus artis partem aliquam adjungi poſſit, ſed ipſa ſeparatim longi temporis, & magnæ atque arduæ cognitionis indigeat. *Cic. de Invent.* L. 1. p. 74.

exerciſe

exerciſe in a Young beginner will not be prepoſterous; Nor will a little of his time and pains be miſpent in Logical diſputation, though it bring with it no immediate increaſe of knowledge. And if, afterwards, he ſhould for a while confine himſelf to ſyllogiſtick form upon Theological and Philoſophical ſubjects; tis true, he will be check'd in his ſpeed, and prevented from ranging over a great extent of argument in a ſhort time: But by ſuch exerciſe, a habit of accuracy will at length inſinuate itſelf into his diſcourſe, even at thoſe times, when he ſhall have occaſion to exert himſelf as an [1] Orator. He may then diſcard [2] thoſe parts of his [3] Syllogiſms,

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1 Eſſe perfecte eloquentis puto, non eam ſolum facultatem habere, quæ ſit ejus propria, fuſe, lateque dicendi, ſed etiam vicinam ejus, atque finitimam Dialecticorum ſcientiam aſſumere. *Cic. Orat.* p. 326.

2 Ut Palæſtrici doctores illos, quos *numeros* vocant, non idcirco diſcentibus tradunt, ut his omnibus ii, qui didicerint, in ipſo luctandi certamine utantur, (plus enim pondere & firmitate & ſpiritu agitur) ſed ut ſubſit copia illa, ex qua unum aut alterum, cujus ſe occaſio dederit, efficiant; Ita hæc pars *Dialectica*, ſive illam malimus dicere *Diſputatricem*, ut eſt utilis ſæpe finitionibus & comprehenſionibus (ſc. *verborum*) & ſeparandis, quæ ſunt differentia, & reſolvenda ambiguitate, & diſtinguendo, dividendo, illiciendo, implicando; ita, ſi totum ſibi vindicaverit in foro certamen, obſtabit melioribus, & ſectas ad tenuitatem ſuam vires ipſa ſubtilitate conſumet. *Quinct.* L. 12. c. 2.

3 *Cicero after having enumerated ſeveral uſeful forms of argumentation, ſubjoins,* — Illud volumus intelligi, nos probe tenere aliis quoque rationibus tractari argumentationes in philoſophiâ multis & obſcuris, de quibus certum eſt artificium conſtitutum. Verum illa nobis abhorrere ab uſu oratorio videntur. *de Invent.*

which a common ſhare of apprehenſion in his hearer or reader can ſupply, and with a better grace, as well as ſpirit, attempt to embelliſh his work, when he is ſecure that the ſubſtance of it is well cemented.

In general, *Diſputation* is very [1] uſeful, as it habituates us to bring a queſtion to the point; as it exerciſes, and puts the ſpirits upon their activity; as it diſciplines our notions, and makes them ready to appear upon ſummons: Add to this, that the keeping our underſtanding upon the ſtretch, whether upon the offenſive, or defenſive, has a natural tendency to ſtrengthen its powers; Our thoughts will mechanically [2] fall

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p. 195. *But though there is no occaſion for the young Student's giving himſelf the trouble to maſter* all *that* Ariſtotle *has delivered upon the ſeveral ſorts of Syllogiſms, will it follow that they are entirely to be diſcarded? He himſelf in ſeveral parts of his works has thrown his reaſoning directly into Syllogiſm, and the different forms of argumentation recited by him,* Topic. p. 248, 249, 250. *are manifeſtly of that ſort.*

1 Fateor me Oratorem, ſi modo ſim, aut etiam quicunque ſim, non ex Rhetorum officinis, ſed ex Academiæ ſpatiis extitiſſe. Illa enim ſunt curricula multiplicium variorumque ſermonum, in quibus Platonis primum impreſſa ſunt veſtigia: ſed & hujus, & aliorum philoſophorum diſputationibus & exagitatus maxime Orator eſt, & adjutus. *Cic. Orat.* p. 302.

2 Hoc exercitatione multa conſequendum; ut, quemadmodum illorum artificum (ſc. *Citharœdorum,*) etiamſi alio ſpectant, manus tamen ipſa conſuetudine ad graves, acutos, medioſque horum ſonos fertur; ſic oratoris cogitationem nihil moretur hæc varietas argumentorum & copia; ſed quaſi offerat ſe, & occurrat; & ut literæ ſyllabæque ſcribentium cogitationem non exigunt, ſic rationes ſponte quadam ſequantur. *Quinct.* L. 5. c. 10.

Sin

into that train, to which they have been accuſtomed, without any exerted act of memory, and perhaps without our being able to quote the rule of our argumentation. Moreover, "ſince diſputation is intended, not ſo much for the diſcovery of truth, as for trial and exerciſe; there can be no harm, or ſhame, if, as the Opponent argues againſt a plain truth, to ſee whether the Reſpondent can defend it; ſo the Reſpondent be allowed to deny a plain truth, if not uncapable of proof, to ſee whether the Opponent can prove it [1]."

As for the many *Terms*, that appear *barbarous* in Treatiſes of old Logick, they agree with all other names in this, that they are no farther uſeful to be learnt, than as we have occaſion to frame thoſe abſtract conceptions, of which they are the ordinary marks. Men of deep thought, and ſtrong attention, are ſometimes apt to flatter themſelves, that they aſcertain their notions with greater accuracy, that thoſe that have gone

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Sin aliquis extiterit aliquando, qui Ariſtotelico more de omnibus rebus, in utramque ſententiam poſſit dicere, & in omni cauſa duas contrarias opiniones, præceptis illius cognitis explicare — quique ad eam rationem adjungat hunc rhetoricum uſum, moremque exercitationemque dicendi: is ſit verus, is perfectus, is ſolus Orator. *Cic. de Orat.* L. 2. p. 256.

1 Mr. *Norris.*

before them; and thus the [1] *Schoolmen* increaſed the language of philoſophical ſubtleties. But the attempt of the *Moderns* towards a reformation, by coining new terms, has by no means removed the abuſe. — The terms of Logick, which is an art purely inſtrumental, are of no more intrinſick value, than the Grammatical names of *Subſtantive*, *Adjective*, *Verb* &c. They, who have not ſagacity or attention enough to diſtinguiſh Scholaſtick notions, can make no uſe of the names: Nor indeed is it of general and neceſſary uſe for [2] all men to attain ſuch nicety. But the Profeſſors of all abſtracted knowledge, muſt contrive ſome method for more eaſily recording their notions thereupon, with greater expedition and preciſeneſs. And thus, every art [3] and every trade, has names, that are uſe-

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1 Ut ei ſtudio (cognitionis rerum) ſe excellentiſſimis ingeniis homines dediderunt, ex eâ ſummâ facultate (ſc. *regendarum civitatum*) vacui ac liberi temporis, multo plura quàm erat neceſſe, doctiſſimi homines, otio nimio & ingeniis uberrimis affluentes, curanda ſibi eſſe ac quærenda, & inveſtiganda duxerunt. *Cic. de Orat.* L. 2. p. 247.

2 Didiciſti non poſſe nos *(Varro loquitur)* Amafanii aut Rabirii ſimiles eſſe, qui nullâ arte adhibitâ, de rebus ante oculos poſitis vulgari ſermone diſputant: nihil definiunt, nihil partiuntur, nihil aptâ interrogatione concludunt, nullam denique artem eſſe nec dicendi nec diſſerendi putant. Nos autem præceptis Dialecticorum & Oratorum (quoniam utramque vim unam eſſe noſtri putant) ſic parentes, ut legibus, verbis, quanquam novis, cogimur uti. *Cic. Acad.* L. 1.

3 *Qualitates* appellavi, quas ποιότητας Græci vocant: quod ipſum apud Græcos non eſt vulgi verbum, ſed philoſophorum,

atque

leſs and unintelligible to any, but thoſe, who are converſant in their reſpective operations. Some few of the old ſcholaſtick terms have been, for want of better, transferred into modern treatiſes upon moſt philoſophical ſubjects; and others have been incorporated into common ſpeech: And as for the reſt, (however they have been miſapplied in particular inſtances by injudicious writers) they are not always found to be that unintelligible jargon, which ſome are pleaſed to call them: But when neither the courſe of a young Gentleman's ſtudy in the Univerſity, nor his profeſſion out of it, will probably require a knowledge of them; it will be no more diſparagement to let them alone, than not to turn over the Dictionary of a language, which he has no occaſion to underſtand.

The ſame may be ſaid of Scholaſtick *Diſtinctions*. They are in many caſes uſeful to prevent confuſion; and, though not neceſſary to convince an unprejudiced underſtanding of a Truth, may yet be neceſſary to obviate or anſwer abſtruſe Difficulties, when once ſuch are

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atque id in multis. Dialecticorum quoque verba nulla ſunt publica: ſuis utuntur: & id quoque commune omnium fere artium. *Cic. Acad.* L. 1. p. 38.

Dabitis profecto, ut in rebus inuſitatis, quod Græci ipſi faciunt, à quibus hæc jam diu tractantur, utamur verbis interdum inauditis. *id.* p. 7.

raiſed;

raiſed; and therefore it would be exerciſing a refined taſte very unſeaſonably, to take offence at them when rightly applyed. I ſhall only add, that, if we are not diſguſted at their quaintneſs, their brevity is no ſmall recommendation in their favour. So long as the circumſtances of human nature ſhall make it neceſſary for us to communicate our thoughts by means of language, it will be impoſſible to keep clear of ambiguities; and therefore, whether we are pleaſed with the old Scholaſtick terms of Diſtinction or no, they, or ſome others of an equivalent import, muſt be adopted.

Mr. *Locke* in his *Eſſay* hath dropp'd many diſparaging reflexions upon Scholaſtick diſtinctions and diſputations: But this might be accounted for from the circumſtances of the Times in which he wrote; particularly from the abſurd chicaneries of ſome Logical diſputants, who having nothing ſolid in their genius or valuable in their ſtock of acquired knowledge, ſtudied to ſhelter theſe defects under the appearance of great ſubtlety to ſurprize and confound their Readers. Hereby Logick, which was invented to fix and rectify the Underſtanding, was made to ſeduce and pervert it; while its precepts inſtead of leading men to knowledge, proved but ſo many ſnares to betray them into error, and to confirm them in it.

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In the ſame manner we find *Seneca* frequently bantering the Logicians of his time. But, like other banterers, he diſplays his ridicule upon ſome trifling miſapplications of the Art; and then, with the melancholy air of true Stoiciſm, diſmiſſes the Subject with that kind of contempt, which would equally foreclose the proſecution of many other branches of uſeful Literature.[1]

Since the decline of Scholaſtick learning, though Science of every kind has received prodigious improvements by the labour and ſagacity of exalted Genius's, yet we find the common run of reaſoners as bad as ever; — not more knowing, but much more conceited; — not ſo ambitious to improve their knowledge, as to conceal their ignorance; — determining magiſterially upon points, even thoſe of the great-

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1 *Thus* Epiſt. ad Lucil. 48. Tu mihi verba diſtorques & ſyllabas digeris: ſcilicet niſi interrogationes vaferrimas ſtruxero, & concluſione falsâ à vero naſcens mendacium adſtrinxero, non potero à fugiendis petenda ſecernere. Mus ſyllaba eſt; Mus autem caſeum rodit; ſyllaba ergo caſeum rodit &c. O pueriles ineptias! &c. *ſo* Epiſt. 113. *he has a formal diſputation.* An virtutes ſint animalia?

Epiſt. 49. Nec ego nego proſpicienda iſta, ſed proſpicienda tantùm & à limine ſalutanda, in hoc unum ne verba nobis dentur, & aliquid eſſe in illis magni & ſecreti boni judicemus. *So again* Ep. 111. Ludit iſtis animus non proficit: — Nec te prohibuerim aliquando iſta agere, ſed tunc cum nihil voles agere. Hoc tamen habent in ſe peſſimum; dulcedinem quandam ſui faciunt, & animum ſpecie ſubtilitatis inductum tenent ac remorantur: cum tanta rerum moles vacet, cum vix tota vita ſufficiat, ut hoc unum diſcas, vitam contemnere.

eſt

eſt moment, without knowing or conſidering the firſt principles of what they are diſcourſing of; — taking themſelves to be maſters of every ſubject, upon which they can raiſe an objection [1], — and adventuring to make their firſt eſſays in the [2] face of the World, which a more modeſt ſet of men formerly thought hazardous enough within the circle of a School. So that to be trifling and poſitive are infirmities, not ſo much owing to the Schools, as to the warmth and inexperience of youth. The human mind is a ſoil naturally productive of them in all ages, and is naturally weeded by experience and meditation.

Let me add that, however Scholaſtick learning has been decry'd, a man of thoughtful diſpoſition, leiſure, and mature judgment, will always find uſeful [3] entertainment among its more

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1 Accuſationibus etiam mediocres in dicendo ſuffecerunt: bonus defenſor nemo, niſi qui eloquentiſſimus fuit. Nam — tanto eſt accuſare, quam defendere, quanto facere, quam ſanare vulnera facilius. *Quinct.* L. 5. c. 13.

2 Ut quiſque optime dicit, ita maxime dicendi difficultatem, varioſque eventus orationis exſpectationemque hominum pertimeſcit. *Cic. de Orat.* L. 1. p. 40.

3 Scholaſtici quantum ingenio valeant ſæpe oſtendunt: ſed in infelicia & artium bonarum ignara ſecula inciderunt: quominus mirum ſi inter multa laudanda, aliqua & condonanda ſunt. Tamen ubi in re *morum* conſentiunt, vix eſt ut errent: quippe perſpicaces admodum ad ea videnda, quæ in aliorum dictis reprehendi poſſunt: in quo ipſo tamen diverſa tuendi ſtudio laudabile præbent modeſtiæ exemplum, rationibus inter ſe certantes, non, qui

mos

ingenious writers; where, if he does not always acquieſce in their determinations, yet he will admire a remarkable ſagacity in canvaſſing a queſtion: though he will ſometimes laugh at the doubles of their diſtinctions, and the miſt of words, which they induſtriouſly throw over the plaineſt ſubjects; yet he may from thence be apprized, how to guard againſt the ſame little ſubterfuges and arts of diſguiſe, which, by miſapplication of language, are every day put in practice in matters of civil commerce and converſation.

I have endeavoured to give ſome weight to the foregoing reflexions by ſubjoining a ſpecimen of the ſentiments of *Cicero* and *Quinctilian*. Their obſervations upon the nature and uſefulneſs of Logick are particularly adapted to the purpoſes of Oratory; and therefore entertain us more agreably, than what others have delivered upon the ſame ſubject with a main view to abſtruſer points, eſpecially (which is often the caſe of the Schoolmen) in falſe Philoſophy and unſound Divinity. But ſtill the ſubſtance of it in both caſes appears beyond contradiction to be the ſame, however varied it may be in its application.

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mos nuper adeo literas inquinare cœpit, convitiis, turpi fœtu impotentis animi. *Grot.* de jur. B. & P. proleg. §. 52.

It were to be wiſhed that *Cicero* had executed his intention [1] of writing a Treatiſe of Logick. No man appears to have made a better uſe of its precepts, or can be more explicit in acknowledging its uſefulneſs. And whoever ſhall give himſelf the pains to peruſe his works, his Rhetorical works eſpecially, will all along meet with expreſſions and terms of Art, which receive conſiderable light from the Logick of the Schools; there are alſo ſuch a number of Logical obſervations, as, if well adjuſted together, might in part ſupply the want of that Treatiſe; — enough certainly to vindicate the common Treatiſes of Logick from the charge of containing a ſet of uſeleſs obſervations.

And that Logical *Diſputations* may not continue to ſtand condemned, as utterly unworthy of a young man of Parts, it may not be improper to direct his view to a piece of Argumentation [2] of *Cicero*'s upon a Logical Queſtion, pretty much in the taſte and manner of Scholaſtick Logicians. This indeed was a youthful performance; and 'twere, at all times, a poor vindication of Pedants to ſay that ſome Great men have occaſionally condeſcended to appear in that cha-

1 *Cic. Topic.* p. 130.
2 *Cic. de Invent.* L. 1.

racter.

racter. But I cannot help eſteeming it to be a circumſtance very favourable to Logick, that this man ſo conſiderable in the ſcenes of active life, both as a Stateſman and an Orator, was early in the proſecution of Logical ſtudies: eſpecially when we find him in his [1] maturer age, upon a review of thoſe ſteps by which he had riſen to his greatneſs, ſtill perſiſting in the ſame ſentiments as to the value of the Logical part of his Education, and recommending it as the proper foundation of Eloquence. He refers us to a particular Oration [2], wherein he found one part of his Logical ſkill to be of conſiderable ſervice to him. And as to another very material point, I mean the ſubſtance and order of his argumentation, we may receive the moſt clear and compendious view of both when reduced into Syllogiſtick form [3]. Few Orators indeed would care to be ſo ſtripp'd of all their embelliſhments, merely to have the juſtneſs of their reaſoning made manifeſt; fewer might be able to bear it. But ſurely every reader muſt be benefited by having the

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1 *Cicero* is ſuppoſed to have wrote his Treatiſe *de Invent.* when about *Twenty*; thoſe *de Topicis*, *Partit. Orat.* & *de Orat.* when *Sixty one*.

2 Tota mihi cauſa pro Cæcina de verbis interdicti fuit: res involutas definiendo explicavimus: — verba ambigua diſtinximus. *id. Orat.* p. 32.

3 See this done in *Freigius's* Edition.

Plan of his Author's reaſoning laid before him, in its original naked form; before Fancy has been at work to give it the colouring and diſguiſe of an agreable appearance. In ſhort, Logical analyſis, is the true, if not the only, method whereby we can ſafely eſtimate the concluſiveneſs of any long train of reaſoning; and whoſoever can habituate himſelf to form ſuch Analyſis with eaſe and quickneſs muſt have great advantages in the courſe of any Debate. Let then the Authority of this celebrated Author be allowed to overrule a popular objection, that is too favourably admitted againſt this Art; as if the ſtudy of it was at beſt a trifling amuſement, and, not only uſeleſs, but deſtructive to all taſte of polite learning; as if it was renouncing the benefit which is offer'd us by the late improvements in Philoſophy, and tended to bring us back to the barbariſm of the Scholaſtick age.

To know How to make a juſt *Definition*; — how to *divide* a ſubject regularly; — how to diſtinguiſh the ſeveral parts of a *Propoſition*; and how to make a *Syllogiſm*, — all this is confeſſedly going but a little way into the world of Science: But ſtill it is doing ſomething towards it; and the more unpardonable therefore is it in any by their indolence, faſtidiouſneſs or ſelf-conceit, to omit the acquiſition of this ſo eaſy an attain-

attainment: And tis much if ſuch perſons, are not themſelves, at one time or other convinced of their faultineſs in this omiſſion, by the diſgrace of falling into ſuch Errors as a little ſhare of Logical ſkill might have prevented. — And with regard to the figure, which any well inſtructed Logician is likely to make in the ſcene of publick life; It happens to him, as, in the ordinary courſe of things, it muſt to every man, that will give himſelf true pains, to lay a foundation of ſound ſcholarſhip, in any other branch of uſeful learning: "The Hermitage of his ſtudy makes him ſomewhat uncouth in the world, and men make him worſe by ſtaring on him. He is ſilly and ridiculous, and it continues with him for ſome quarter of a year out of the Univerſity. But practiſe him a little in men, and bruſh him over with good company, and he ſhall outballance the Gliſterers, as far as a ſolid ſubſtance does a feather, or Gold gold Lace[1]."

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1 Bp *Earle*'s Characters.

A TABLE

Of the ſeveral principal Writers of Logick.

FOR the *Hiſtory* of Logick it may be proper to conſult
Ger. Joh. Voſſius de Logicâ.
Joh. Ger. Walchius, Hiſtoria Logicæ.
Jo. Fran. Buddeus, *Iſagoge Hiſtorico-Theologica.*
Gott. Stollius, *Introductio in Hiſtoriam Litterariam.*
Monſ. *Rapin*'s and Mr *Baker*'s Reflexions upon Logick.
Preface and Concluſion to Dr *Aldrich*'s Logick.

Zeno of *Elea* is uſually ſpoke of as the inventer of this Art. — Nothing of his remains extant. — Neither has *Plato* any piece expreſsly upon the ſubject.

Zeno explained himſelf by way of Dialogue; in which he was followed by *Plato*. — From which circumſtance, the Art of Reaſoning received the name of *Dialectica*.

Ariſtotle is therefore conſidered as the firſt that reduced the Art into a Syſtem.

Andronicus Rhodius is ſuppoſed to have methodized his Works as they ſtand at preſent. *Ariſtotle*'s Logick is divided into three parts;

1. Κατηγορικὴ, which treats of ſimple Terms, and particularly the ten *Categories* or *Prædicaments*. (Hereto is uſually prefixed *Porphyrius*'s Treatiſe of general Terms.)
2. Ερμηνευτικὴ, concerning propoſitions and their ſeveral kinds.
3. Αναλυτικὴ, concerning Argumentation and the framing of Syllogiſms. — This treatiſe is ſubdivided into two parts, uſually called, the one of them *Analytica priora*, treating concerning the parts of Syllogiſms and their *form*: — the other *Analytica poſteriora* (as being placed after the foregoing) treating concerning the *matter* of Syllogiſms; this part is ſubdivided into
   1. Αποδεικτικὴ, of *Demonſtration* ſtrictly ſo called.
   2. Τοπικὴ, wherein are laid down general principles for diſputation where *Probability* is to be had.
   3. Σοφιστικὴ, wherein are repreſented various inſtances of *Fallacious* Argumentation. — The whole work takes up 444 pages in the Folio Edit. of *Duvall*. Gr. Lat.

Tis ſometimes publiſh'd diſtinctly under the title of Οργανον as being the *Inſtrument* of all others the moſt uſeful. See a compendious view of it in *Stanley*'s Life of this Philoſopher.

The Logick of *Ariſtotle* appears from *Cicero* to have been in vogue among the *Romans*;

Quincti-

Quinctilian likewiſe has made conſiderable uſe of it.

Galen, the great Phyſician, was particularly fond of it, and has commented upon it. As did likewiſe *Porphyrius*.

No Latin Tranſlation of it ſeems to have been made till that of *Severinus Boethius*; who illuſtrated part of it by his Commentaries. After which, notwithſtanding the interruption given to this and other branches of Literature by the barbarous Nations, overſpreading the Weſtern Empire, *Ariſtotle* was not without his Admirers. But during this interval the ſtudies of Learning and Philoſophy were chiefly carried on by the Moors of Spain and Africa; and by their labours *Ariſtotle* with many of the Antients was tranſlated into Arabick, and illuſtrated by ſeveral Commentaries; particularly thoſe of *Alfarabius*, *Avicenna* & *Averroes*.

To them ſucceeded the numerous tribe of Schoolmen.

(Of the imperfections &c. of the Scholaſtick Logick ſee *Barth. Keckermannus* Præcogn. Log. Tract. II. c. II. 9. 40.)

Upon the revival of the ſtudies of polite learning in Europe, after the deſtruction of Conſtantinople, the Schoolmen began to be ſeverely handled for the falſe taſte of writing which had been introduced during the 3 or 4 preceding Centuries. And a reformation in this branch of Science was ſet on foot by

Laurentius Valla in his *Dialecticæ Diſputationes*.

Phil. Melancthon in his *Erotemata Dialectica*.

Ludovicus Vives. *Marius Nizolius*, and *Pet. Ramus*.

(*John Milton* employed his pen in illuſtrating this Logical treatiſe by his larger work intituled, *Artis Logicæ plenior Inſtitutio* &c.)

Joh. Sturmius — in his *Inſtitutiones Dialecticæ*.

Franc. Bacon ſtruck new light into the Art of Reaſoning, particularly with regard to the promoting of natural knowledge, in that collection of *Aphoriſms*, call'd *Organon Novum*.

Des Cartes threw his Logical ſentiments into his *Meditationes de Philoſophiâ primâ* & Treatiſe *de Methodo*.

Gaſſendus animadverted upon it: and afterwards wrote a Logick of his own; as did many Inſtructors of Youth in the ſeveral Univerſities, as well as private perſons for their own amuſement; enlarging their ſentiments upon this or that part, according to their reſpective fancies.

Rob. Sanderſon's *Logica*, is a conciſe compendium of *Ariſtotle*'s *Organum*; to which is ſubjoined a uſeful treatiſe *de uſu Logicæ*.

With this may be mentioned *Smith*, *Manuductio ad Logicam*.

Jo. Fell Grammatica Rationis, ſive *Inſtitutiones Logicæ*.

Jo. Wallis Logica. — *Artis Logicæ Compendium* (by Dr *Aldrich*.)

In the courſe of *Philoſophy* intitled *Philoſophia Burgundiana* may likewiſe be ſeen a neat compendium of the *Ariſtotelick* Logick;

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to it are ſubjoined Determinations of the principal Logical Queſtions, with the Objections and Anſwers.

This with what may be ſeen in *Smiglecii Logica, Stahlii Axiomata & Iſendoorn Effata*, will be abundantly ſufficient for the uſe of Logico-Scholaſtick Diſputation.

Jo. Claubergius a Carteſian publiſhed *Logica Vetus & Nova.*

Something new upon the doctrine of Ideas together with an elegant repreſentation of the more uſeful parts of the Scholaſtick Logick was publiſhed in *L'Art de Penſer* afterwards tranſlated into Latin under the Title of *Ars cogitandi.*

Nic. Malebranche publiſh'd his Treatiſe *De la recherche de la Verite* 1674; afterwards by him improved in 6 Books.

Chriſt. Thomaſius, Introductio in Philoſophiam Aulicam.

Ehrenfr. Walt. a Tchirnhaus his *Medicina Mentis.*

John Locke — his celebrated *Eſſay concerning the Human Underſtanding* 1690, and afterwards — his *Conduct of the Underſtanding.*

Jo. Clericus in his *Ars Logica* 1692 has ſelected much from the *Ars cogitandi* & Mr *Locke*'s Eſſay.

Jo. Petr. de Croſa or Crouſaz Syſteme de Reflexions qui peuvent contribuer a la netleté & a l'etendue de nos connoiſſances, ou, nouvel Eſſai de Logique.

Nic. Hieron. Gundlingii, Via ad veritatem.

Frid. Beckmannus — Inſtitutiones Logicæ.

P. Buffier — Principes du Raiſſonnement expoſez en deux Logiques nouvelles.

Chriſtianus Wolfius in an elaborate work hath demonſtrated the truth and ſet forth the uſefulneſs of the principal rules of the Scholaſtick Logick,

Philoſophia Rationalis, five, *Logica Methodo ſcientifica pertractata & ad uſum ſcientiarum atque vitæ aptata.*

Other good Books in this Art may be added, as, *Logick* by Dr. *I. Watts.*

Antonii Genuenſis, Neapolitani, *Elementorum Artis Logico-Criticæ.* Libri V.

The Elements of *Logick* in 4 Books by *W. Duncan.*

10 FE 58

FINIS.

APPENDIX TO REFLEXIONS upon LOGICK.

A Writer in the *Biographia Britannica*, under the article *John Locke* (note S) having misrepresented the design of the foregoing treatise, *as drawn up in the same judgment with those Heads of Houses in Oxford, who a little before Mr. Locke's death join'd in a resolution to prevent the Reading of the Essay in their Colleges*, I cannot help considering this as a publick Call upon me to say something in answer to the Imputation.

I am in some degree obliged to the Gentleman for adding large extracts from the *Reflexions*; which, even in that state of mutilation, I am content to submit to the Reader, being well assured, that, without great violence, nothing derogatory to the just honour of Mr. *Locke* can be extorted from them, nothing that has the least tendency to discourage Youth from reading the Essay.

I am indeed of opinion, that Mr. *L.* has sharpened his censure of Scholastick Disputations beyond what the reason of the case will justify; neither would it be at all difficult to point out the occasion of his doing so: I am of opinion likewise, that the *Essay* is not a book proper to be put into the hands of Boys (the common sort of Boys) just come from the Grammar-School; and this for the reasons given by me at large in the *Re-*

flexions; viz. that Mr. *L's* illuſtrations are drawn chiefly from Sciences with which ſuch Boys can rarely be acquainted: Add to this, that ſome parts of the *Eſſay* are immenſely tedious, and in a few articles full of unneceſſary puzzle, if not of miſtake. — But though I judged it proper, in my former office of *Tutor*, to uſe another initiatory treatiſe of Logick with my Pupils, yet I failed not in the courſe of their Inſtruction to go over the three laſt books of the *Eſſay* with them; I ever recommended the *Eſſay* to them to be ſtudied with critical exactneſs, ſelecting the principal points contained in it to be diſcuſſed by them, by way of private exerciſe in Writing, and of publick exerciſe in their Diſputations.

And I ſcruple not to declare, that my preſent ſentiments are very different from the *judgment of thoſe perſons, if any ſuch there be at preſent, who would diſcourage and prevent the reading of the Eſſay.* For, I think the character of Mr. *Locke* to have been very juſtly endeared to ſenſible men by his Writings, as a great Maſter in the Art of Reaſoning, as an able Advocate for Civil and Religious Liberty, and as an excellent Improver as well as Reformer of Philoſophical Studies — indeed as one of the beſt Models for forming and purſuing them.

10 FE 58

Chriſt Church, Oxford.
Aug. 19, 1760.

EDW. BENTHAM.